Manitoba
Agriculture
and Food

Guidelines For Estimating

Bison Heifer

Production Costs

Based on 60 Head

nformation Update

www.gov.mb.ca/agriculture/

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This guide is designed to provide you with planning information and a format for calculating costs of production of a bison heifer enterprise. The production costs included in this enterprise budget is not a cost study of the bison industry in Manitoba, they are estimated costs based on accepted production practices and current market conditions.

The budget estimates are based on a number of assumptions which are clearly defined in the supporting pages. Input costs are based on recommended practices and/or information obtained from producers. Good management is assumed in that a balanced feeding program is being followed, bison are on a herd health program and handling facilities are included.

The guideline can be useful for comparison purposes. Comparison of costs at different levels of production can be made with other farms, the farm over a period of time or comparing the plan with the actual results at the end of the planning period.

The budget may be adjusted to reflect your own unique situation by substituting your own figures in the appropriate places. Each bison producer is encouraged to determine their own costs based on their own inputs, pasture program and level of management.

Also available, on the Manitoba Agriculture and Food website, is an Excel spreadsheet and it can be downloaded from the following address: **http://www.gov.mb.ca/agriculture**.

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Bison Heifer Replacement Production Costs
Based on 60 Heifers

A. OPERATING COSTS	$/Heifer	Total	Your Costs
1. Feed Costs:			
1.01 Grain	$47.60	$2,856	
1.02 Hay	$134.00	$8,040	
1.03 Salt & Minerals	$24.24	$1,454	
Total Feed Cost	**$205.84**	**$12,350**	
2. Other Operating Costs:			
2.01 Heifer cost	$1,000.00	$60,000	
2.02 Breeding cost	$66.67	$4,000	
2.03 Transportation	$7.14	$429	
2.04 Veterinary & Medicine	$19.82	$1,189	
2.05 Maintenance & Repairs	$20.00	$1,200	
2.06 Utilities	$11.67	$700	
2.07 Death Loss	$11.32	$679	
2.08 Insurance	$17.43	$1,046	
2.09 Miscellaneous	$8.33	$500	
Subtotal Operating Costs	$1,368.22	$82,093	
2.10 Operating Interest	$114.45	$6,867	
TOTAL OPERATING COSTS	**$1,482.67**	**$88,960**	
B. FIXED COSTS			
3. Depreciation			
3.01 Facilities	49.17	$2,950	
3.02 Machinery & Equipment	$48.88	$2,933	
4. Investment			
4.01 Facilities	$19.67	$1,180	
4.02 Machinery & Equipment	$17.60	$1,056	
4.03 Pasture Land & Fencing	$123.50	$7,410	
TOTAL FIXED COSTS	**$258.82**	**$15,529**	
TOTAL OPERATING AND FIXED COSTS	**$1,741.49**	**$104,489**	
C. Labour	**$80.00**	**$4,800**	
TOTAL COST OF PRODUCTION	**$1,821.49**	**$109,289**	

Assumptions

1. This budget is based on the purchase of 60 bison heifers and 4 bulls.

2. For purposes of this budget the bulls were assumed to have been purchased in the 2nd year and sold immediately after the breeding season.

3. The time frame, from purchase of replacement heifers to sale of calves, is 605 days.

Bison Heifer Replacement Production Cost Worksheet

				Your Cost
A. OPERATING COSTS				
1. Feed Costs:				
1.01 Rolled Grain				
Year 1		3	lbs /day	
	x	120	days/year	
	x	$0.07	/bushel	
	=	$25.20	/heifer	
Year 2		4	lbs /day	
	x	80	days/year	
	x	$0.07	/bushel	
	=	$22.40	/heifer	
Total		**$47.60**	**/heifer**	
1.02 Hay				
Year 1		1.25	tons	
	x	$40.00	/ton	
	=	$50.00	/heifer	
Year 2		2.10	tons	
	x	$40.00	/ton	
	=	$84.00	/heifer	
Total		**$134.00**	**/heifer**	

				Your Cost
1.03 Salt and Minerals				
Year 1		7	lbs salt/year	
	x	$0.14	$/lb	
	=	$0.98	/heifer	
		10	lbs mineral/year	
	x	$0.40	$/lb	
	=	$4.00	/heifer	
Year 2		11	lbs salt/year	
	x	$0.14	$/lb	
	=	$1.54	/heifer	
		14	lbs mineral/year	
	x	$0.40	$/lb	
	=	$5.60	/heifer	
Total		**$12.12**	**/heifer**	
2. Other Operating Costs:				
2.01 Heifer Cost				
		$1,000	**/heifer**	
2.02 Breeding Cost				
		$5,500.00	bull original value	
	-	$4,500.00	bull salvage value	
	=	$1,000.00	net cost per bull	
	x	4	number bulls	
	÷	60	heifers	
	=	**$66.67**	**/heifer**	
2.03 Transportation Cost				
		$3.00	/ loaded mile	
	x	100	distance (miles)	
	÷	42	load capacity	
	=	**$7.14**	**/heifer**	

				Your Cost
2.04 Veterinary Medicine & Supplies				
Medication				
year 1		$0.86	blackleg	
	+	$0.53	vitamin	
	+	$3.10	parasite control	
	=	$4.49	/heifer	
year 2		$8.00	parasite control	
	+	$0.43	blackleg	
	=	$8.43	/heifer	
herd health program				
		$90.00	/hour charge	
	x	3	hours	
	÷	60	heifers	
	=	$4.50	/heifer	
mileage				
		$0.90	/km charge	
	x	160	kilometres	
	x	1	visits	
	÷	60	heifers	
	=	$2.40	/heifer	
Total	**=**	**$19.82**	**/heifer**	
2.05 Fuel, Oil, Repairs & Maintenance				
machinery costs for 2 years				
		$200.00	total fuel cost	
	+	$200.00	oil, repairs & maint.	
	÷	60	heifers	
	=	$6.67	/heifer	
facilities,fences etc.costs for 2 years				
		$800.00	repairs & maint.	
	÷	60	heifers	
	=	$13.33	/heifer	
Total	**=**	**$20.00**	**/heifer**	

			Your Cost
2.06 Utilities			
	$700.00	total cost	
÷	60	heifers	
=	**$11.67**	**/heifer**	
2.07 Death Loss			
	$1,000.00	heifer cost	
+	$132.24	half other costs	
x	1.0	mortality rate	
	$11.32	**/heifer**	
2.08 Insurance			
	$29,500	bldg. & equip. invest.	
x	$0.60	cost/$100 capital	
	2	years	
÷	$100	units of $100	
÷	60	heifers	
=	$5.90	/heifer	
	$1,000.00	value of heifer	
	$102.92	½ of feed	
	$66.81	½ other (excluding death loss)	
÷	$100	units of $100	
x	$0.45	insurance rate/$100	
x	2	years	
=	$10.53	/heifer	
	$30.00	add'l liability	
÷	60	heifers	
x	2	years	
=	$1.00	/heifer	
Total =	**$17.43**	**/heifer**	
2.09 Miscellaneous			
	$500.00	total office expenses	
÷	60	heifers	
=	**$8.33**	**/heifer**	

Your Cost

2.10 Operating Interest

(Operating interest is charged on the total cost of the heifer plus one half of the other operating costs)

	$1,000.00	heifer cost	_____
+	$150.78	1/2 feed & other costs	_____
x	6.0	operating interest rate	_____
+	365	days per year	_____
x	605	days on feed	_____
=	**$114.45**	**/heifer**	_____

Capital Costs

		Your Cost
Handling Facilities		
Holding Chutes	$6,000	
Troughs & Miscellaneous	$2,000	
Waterers (2 @ $ 1000)	$2,000	
Squeeze, Gates & Scale	$6,000	
Well & Pressure System	$3,500	
Pens (working& Sorting)	$10,000	
Total Building Cost	**$29,500**	
Machinery & Equipment:		
Miscellaneous	$2,000	
Tractor & Loader	$20,000	
Total	**$22,000**	
Land & Fencing		
Land 320 acres @ $150/acre	$48,000	
Fence		
- perimeter 3 miles @ $7,000/m	$21,000	
- internal 1.5 miles @ $3,000/mi	$4,500	
Total	**$73,500**	
Total Capital Investment	**$125,000**	

B. FIXED COSTS

3. Depreciation:

$$\frac{\textit{Original Cost - Salvage Value}}{\textit{Useful Life}}$$

3.01 Handling Facilities

	$29,500	original value
-	0	salvage value
+	20	years useful life
+	60	heifers
x	2	years
=	**$49.17**	**/heifer**

3.02 Machinery & Equipment

			Your Cost
a) Tractor & Loader			
	$20,000	original value	
-	$4,000	salvage value	
+	12	years useful life	
+	60	heifers	
x	2	years	
=	$44.44	**/heifer**	
b) Miscellaneous			
	$2,000	original value	
-	$400	salvage value	
+	12	years useful life	
+	60	heifers	
x	2	years	
=	$4.44	**/heifer**	
Total =	**$48.88**	**/heifer**	

4. Investment:

$$\frac{\textit{Original Value + Salvage Value}}{2} \times \textit{Investment Rate}$$

4.01 Handling Facilities

	$29,500	total building value	
+	$0	salvage value	
+	2	average	
x	4.0	% investment rate	
+	60	heifers	
x	2	years	
=	**$19.67**	**/heifer**	

Your Cost

4.02 Machinery & Equipment

a) Tractor and Loader

$20,000	original value	
+ $4,000	salvage value	
÷ 2	average	
x 4.0	% investment rate	
÷ 60	heifers	
x 2	years	
= $16.00	/heifer	

b) Miscellaneous Machinery

$2,000	original value	
+ $400	salvage value	
÷ 2	average	
x 4.0	% investment rate	
÷ 60	heifers	
x 2	years	
= $1.60	/heifer	

Total	**=**	**$17.60**	**/heifer**

4.03 Pasture

Land

$48,000	land cost	
x 4.00	% investment rate	
÷ 60	heifers	
x 2	years	
= $64.00	/heifer	

Fence Depreciation Cost (no salvage value)

$25,500	fence cost	
- $0	salvage value	
÷ 20	years useful life	
÷ 60	heifers	
x 2	years	
= $42.50	/heifer	

				Your Cost
Fence Investment Cost				
		$25,500	fence cost	
	+	$0	salvage value	
	+	2	average	
	x	4.0	% investment rate	
	÷	60	heifers	
	x	2	years	
	=	$17.00	/heifer	
Total	**=**	**$123.50**	**/heifer**	

C. Labour:

	4.0	hours/heifer/year	
x	$10.00	/hour	
x	2	years	
=	**$80.00**	**/heifer**	

For more information contact your local Manitoba Agriculture and Food Office

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